

D.11 Call Forwarding—No Answer on a Single System

An incoming call arrives for the intercept subject (S) from Party A at 555-1111. After ringing the intercept subject for a short time, the call is forwarded to Party B at 555-2222. The call is forwarded from that number to Party C at 555-3333. Party C answers the call. The call is released.

Table 25: Call Forwarding—No Answer on a Single System Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		
2	An incoming call arrives for the intercept subject from Party A at 555-1111.	IDIAP> TerminationAttempt (5551111) CIAP> CCOpen (CCC1)	
3	After ringing the intercept subject for a short time, the call is forwarded to Party B at 555-2222.	IDIAP> Redirection (5552222)	
4	The call is forwarded from that number to Party C at 555-3333. (Call forwarding is performed by Party B's service.)		
5	Party C answers the call.	IDIAP> Answer (Unknown)	
6	The call is released.	IDIAP> Release CIAP> CCClose (CCC1)	

The next scenario repeats this scenario, but shows it happening on different systems. Some system architectures may provide only the information shown in the next scenario, even when the call occurs in a single system.

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D.12 Call Forwarding—No Answer on Different Systems

An incoming call arrives for the intercept subject (S) from Party A at 555-1111. After ringing the intercept subject for a short time, the call is forwarded to Party B at 555-2222. The call is forwarded from that number to Party C at 555-3333. Party C answers the call. The call is released.

Table 26: Call Forwarding—No Answer on Different Systems Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		S
2	An incoming call arrives for the intercept subject from Party A at 555-1111.	IDIAP> TerminationAttempt (5551111) CIAP> CCOpen (CCC1)	S
3	After ringing the intercept subject for a short time, the call is forwarded to Party B at 555-2222.	IDIAP> Redirection(5552222)	S
4	The call is forwarded from that number to Party C at 555-3333. (Call forwarding is performed by Party B's service.)		S
5	Party C answers the call.	IDIAP> Answer (Unknown)	S
6	The call is released.	IDIAP> Release CIAP> CCCclose (CCC1)	S

D.13 Two Bearer Channels, Plus Call Transfer


The intercept subject (S), an ISDN subscriber calls Party A at 555-1111. Party A answers. Party B at 555-2222 calls the intercept subject. The intercept subject answers the call from Party B. The intercept subject transfers the call to Party C at 555-3333. Party C answers. Party A releases. Parties B and C release.

Table 27: Two Bearer Channels, Plus Call Transfer Scenario

(Sheet 1 of 2)

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		
2	The intercept subject, an ISDN subscriber calls Party A at 555-1111.	IDIAP> Origination (User Input="5551111", Called Party=2025551111) CIAP> CCOpen (CCC1)	
3	Party A answers.	IDIAP> Answer (Unknown)	
4 *	Party B at 555-2222 calls the intercept subject.	IDIAP> TerminationAttempt (5552222) CIAP> CCOpen (CCC2)	
5 *	The intercept subject answers the call from Party B.	IDIAP> Answer (Called)	
6 *	The intercept subject transfers the call to Party C at 555-3333.	IDIAP> Origination (User Input="5553333", Called Party=2025553333)	
7 *	Party C answers	IDIAP> Answer (Unknown)	
8	Party A releases.	IDIAP> Release CIAP> CCCClose (CCC1)	

Table 27: Two Bearer Channels, Plus Call Transfer Scenario (Sheet 2 of 2)

Step	Action	Reported Event	Connection Diagram
9 *	Parties B and C release.	IDIAP> Release CIAP> CCClose (CCC2)	S' 

* Steps 4, 5, 6, 7, and 9 use a different Call Identity than other steps in this scenario.

D.14 Outgoing Call, Plus Three-Way Calling

The intercept subject (S) goes off-hook and dials Party A at 1 (202) 555-1111. Party A answers and they converse. The intercept subject flashes to invoke Three-Way Calling. The intercept subject dials Party B at 555-2222. Party B answers and they converse. The intercept subject flashes again to bridge the three parties.

Table 28: Outgoing Call, Plus Three-Way Calling Scenario (Sheet 1 of 2)





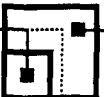

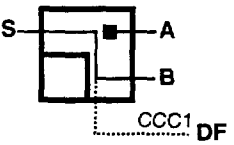
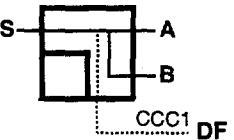

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		S 
2	The intercept subject goes off-hook...	CIAP> CCOpen (CCC1)	S  CCC1 DF
3	...and dials Party A at 1 (202) 555-1111.	IDIAP> Origination (User Input="2025551111", Called Party=2025551111)	S  A CCC1 DF
4	Party A answers and they converse.	IDIAP> Answer (Unknown)	S  A CCC1 DF
5	The intercept subject flashes to invoke Three-Way Calling.		S  A CCC1 DF
6	The intercept subject dials Party B at 555-2222.	IDIAP> Origination (User Input="5552222", Called Party=2025552222)	S  A B CCC1 DF


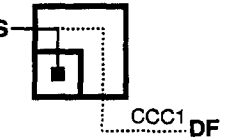
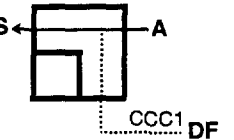
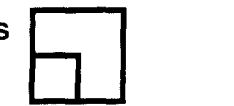
Table 28: Outgoing Call, Plus Three-Way Calling Scenario**(Sheet 2 of 2)**

Step	Action	Reported Event	Connection Diagram
7	Party B answers and they converse.	IDIAP> Answer (Unknown)	
8	The intercept subject flashes again to bridge the three parties.		
9	The call is released.	IDIAP> Release CIAP> CCClose (CCC1)	

D.15 Speed Calling

The intercept subject (S) dials Party A using a speed number #12. The speed number is expanded to 555-1111. The call is abandoned.

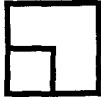
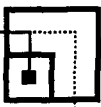

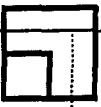
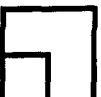
Table 29: Speed Calling Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		
2	The intercept subject goes off-hook...	CIAP> CCOpen (CCC1)	
3	...and dials Party A using a speed number #12. The number is expanded to 555-1111.	IDIAP> Origination (User Input="#12", Called Party=2025551111)	
4	The call is abandoned.	IDIAP> Release CIAP> CCClose (CCC1)	

D.16 Multiple Translations on Single System

The intercept subject (S) dials Party A using a speed number, #12. The speed number is expanded to A' 800-555-1111. The 800 number is expanded by the switch to A" (202) 555-2222. The call is answered. The call is released.

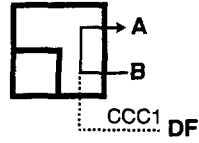
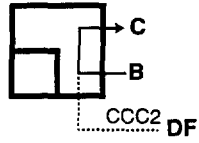
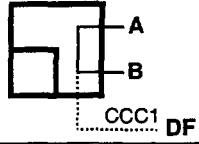
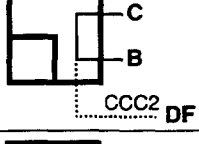

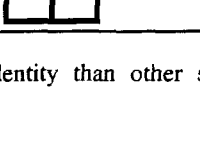
Table 30: Multiple Translations on a Single System Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		S 
2	The intercept subject goes off-hook...	CIAP> CCOpen (CCC1)	S  CCC1 DF
3	...and dials Party A using a speed number, #12. The number is expanded to A' 800-555-1111. This number is expanded to A" (202) 555-2222.	IDIAP> Origination (User Input="#12", Called Party=8005551111) IDIAP> Origination (Translation Input= "8005551111", Called Party=2025552222)	S  CCC1 DF
4	The call is answered.	IDIAP> Answer (Unknown)	S  CCC1 DF
5	The call is released.	IDIAP> Release CIAP> CCClose (CCC1)	S 

D.17 Multiple Call Scenario

A call from Party A at 555-1111 arrives and is forwarded to Party B at 555-2222. A call from Party C at 555-3333 arrives and is forwarded to Party B at 555-2222. The first call is released. The second call is released.

Table 31: Multiple Call Scenario

Step	Action	Reported Event	Connection Diagram
1	A call from Party A at 555-1111 arrives and is forwarded to Party B at 555-2222.	IDIAP> TerminationAttempt (5551111) IDIAP> Redirection (5552222) CIAP> CCOpen (CCC1)	S' 
2 *	A call from Party C at 555-3333 arrives and is forwarded to Party B at 555-2222.	IDIAP> TerminationAttempt (5553333) IDIAP> Redirection (5552222) CIAP> CCOpen (CCC2)	S'' 
3	The first call is answered.	IDIAP> Answer (Unknown)	S' 
4 *	The second call is answered.	IDIAP> Answer (Unknown)	S'' 
5	The first call is released.	IDIAP> Release CIAP> CCClose (CCC1)	S' 
6 *	The second call is released.	IDIAP> Release CIAP> CCClose (CCC2)	S'' 

* Steps 2, 4, and 6 use a different Call Identity than other steps in this scenario.

D.18 Simple Call Delivery to a Mobile Station

A call arrives at a roaming intercept subject's Home System (S') from Party A at (202) 555-1111. This call is redirected to the system serving the intercept subject (S) using a Temporary Local Directory number of (202) 555-9999. The intercept subject answers the call. The call is released. (Note: this scenario assumes that the electronic surveillance order applies to both the Redirecting System (or as *IS-41* calls it, the Originating System) and the current Serving System).

Table 32: Simple Call Delivery Scenario (Sheet 1 of 2)

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle. The intercept subject is registered on a roaming system.		<p>Redirecting (1)</p> <p>Serving (2)</p>
2	A call arrives at the intercept subject's Redirecting System from Party A at (202) 555-1111.	IDIAP ₁ > TerminationAttempt (2025551111) CIAP ₁ > CCOpen (CCC1)	<p>Redirecting (1)</p> <p>Serving (2)</p>
3	This call is redirected to the System Serving the intercept subject using a Temporary Local Directory number of (202) 555-9999.	IDIAP _{HLR} > TerminationAttempt (Unknown) ^a IDIAP _{HLR} > Redirection (2025559999) IDIAP ₁ > Redirection (2025559999) IDIAP ₂ > TerminationAttempt (2025559999) ^b CIAP ₂ > CCOpen (CCC2) ^c	<p>Redirecting (1)</p> <p>Serving (2)</p>

Table 32: Simple Call Delivery Scenario

(Sheet 2 of 2)

Step	Action	Reported Event	Connection Diagram
4	The intercept subject answers the call.	IDIAP ₁ > Answer (Unknown) IDIAP ₂ > Answer (2025550000)	<p>Redirecting (1)</p> <p>Serving (2)</p>
5	The call is released.	IDIAP ₁ > Release CIAP ₁ > CCClose (CCC1) IDIAP ₂ > Release CIAP ₂ > CCClose (CCC2)	<p>Redirecting (1)</p> <p>Serving (2)</p>

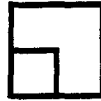
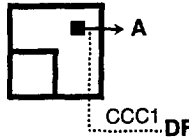
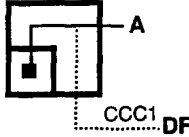
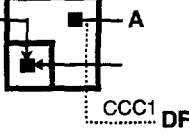
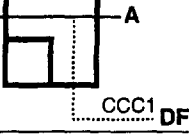

Table Notes

- The HLR-based IDIAP may be necessary for TSPs that allow call redirection without access to the call content.
- Report the Temporary Local Directory Number (or equivalent) used to route the call rather than the terminal directory number.
- If CCC1 and CCC2 pass through the same Delivery Function (e.g., pivoted content delivery), one of the CCCs should be eliminated. Before the subject answers, the CCC1 is the most appropriate channel. After the subject answers, CCC2 is the most appropriate channel.

D.19 Password Call Acceptance and Flexible Alerting

A call arrives at an intercept subject pilot number from a party (A) at (202) 555-1111. The system prompts the calling party to enter a password. Party (A) enters a valid password, 123456. Flexible alerting alerts the intercept subject at 202-555-0000 and party (B) at 555-2222. The switch monitors their call progress tones. The intercept subject answers. The call attempt to B is automatically abandoned. The call is released.

Table 33: Password Call Acceptance and Flexible Alerting Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		S 
2	A call arrives at an intercept subject pilot number from a party (A) at (202) 555-1111. The system prompts the calling party to enter a password.	IDIAP> TerminationAttempt (2025551111) IDIAP> Answer (Network) CIAP> CCOpen (CCC1)	S 
3	Party (A) enters a valid password, 123456.		S 
4	Flexible alerting alerts the intercept subject at 202-555-0000 and party (B) at 555-2222. The switch monitors their call progress tones.	IDIAP> Redirection (2025550000) IDIAP> Redirection (5552222)	S 
5	The intercept subject answers. The call attempt to B is automatically abandoned.	IDIAP> Answer (2025550000)	S 
6	The call is released.	IDIAP> Release CIAP> CCClose (CCC1)	S 

D.20 Password Call Acceptance and Call Forwarding

A call arrives at an intercept subject number from a party (A) at (202) 555-1111. The system answers the call and prompts the calling party to enter a password. Party (A) enters a valid password, 123456. The call is forwarded to Party (B). The call attempt is abandoned.




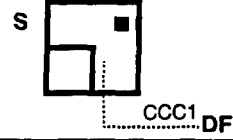
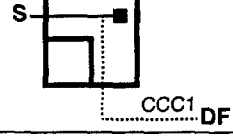
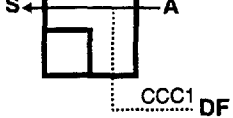
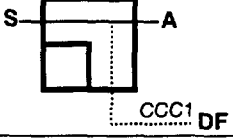

Table 34: Password Call Acceptance and Call Forwarding Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		S
2	A call arrives at an intercept subject number from a party (A) at (202) 555-1111. The system answers the call and prompts the calling party to enter a password.	IDIAP> TerminationAttempt (2025551111) IDIAP> Answer (Network) CIAP> CCOpen (CCC1)	S
3	Party (A) enters a valid password, 1233456.		S
4	The call is forwarded to Party (B).	IDIAP> Redirection (5552222)	S
5	The call is abandoned.	IDIAP> Release CIAP> CCClose (CCC1)	S

D.21 Completed Call To Busy Subscriber

Previously the subject placed a call to busy subscriber A at 555-1111. The subject goes off-hook, enters a feature code *333 indicating that the call should be completed to the busy subscriber, and goes back on-hook. Later, subscriber A becomes available. The subject is alerted with distinctive alerting. The subject answers. The call is extended to subscriber A. The call is answered. Later both parties disconnect.

Table 35: Completed Call To Busy Subscriber


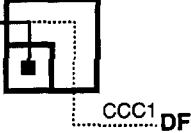

Step	Action	Reported Event	Connection Diagram
1	The call connections are idle. Previously the subject placed a call to busy subscriber A at 555-1111.		S 
2	The subject goes off-hook, enters a feature code *333 indicating that the call should be completed to the busy subscriber, and...	CIAP> CCOpen (CCC1) IDIAP> Origination (User Input="*333", Called Party=2025551111)	S 
3	...goes back on-hook.	IDIAP> Release CIAP> CCClose (CCC1)	S 
4	Later, subscriber A becomes available. The subject is alerted with distinctive alerting.	CIAP> CCOpen (CCC1) IDIAP> TerminationAttempt (Network)	S 
5	The subject answers.	Answer (Called)	S 
6	The call is extended to Party A.	IDIAP> Origination (User Input="", Called Party=2025551111)	S 
7	The call is answered.	IDIAP> Answer (Unknown)	S 
8	Later both parties disconnect.	IDIAP> Release CIAP> CCClose (CCC1)	S 

D.22 Dialed Feature Code Digits

The intercept subject invokes a feature code, *222, to de-activate Call Forwarding—Busy. The status of the change is provided audibly to the

intercept subject. The call is released.

Table 36: Dialed Feature Code Digits Scenario

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle.		S 
2	The intercept subject invokes a feature code, *222.	CIAP> CCOpen (CCC1) IDIAP> Origination (User Input = "**222")	S 
3	The status of the change is provided audibly to the intercept subject.		No change.
4	The call is released.	IDIAP> Release CIAP> CCClose (CCC1)	S 

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D.23 Call Release to Pivot

A call arrives at a roaming intercept subject's Home System (S') from Party A at (202) 555-1111. This call is redirected to the system serving the intercept subject (S) using a Temporary Local Directory Number of (202) 555-9999. The call is not answered and is redirected again by the redirecting system to Party B at 555-2222 (using release to pivot) to the forward-to number for an unanswered call.

Table 37: Call Release to Pivot Scenario (Sheet 1 of 2)

Step	Action	Reported Event	Connection Diagram
1	The call connections for the IAP are idle. The intercept subject is registered on a Serving System.	SSIAP _{HLR} > ServingSystem	<p>Redirecting (1)</p> <p>Serving (2)</p>
2	A call arrives at the intercept subject's Redirecting System from Party A at (202) 555-1111.	IDIAP ₁ > TerminationAttempt (2025551111) CIAP ₁ > CCOpen (CCC1)	<p>Redirecting (1)</p> <p>Serving (2)</p>
3	This call is redirected to the system serving the intercept subject using a Temporary Local Directory Number of (202) 555-9999.	IDIAP ₁ > Redirection (2025559999) IDIAP ₂ > TerminationAttempt (2025559999 via 2025550000) CIAP ₂ > CCOpen (CCC2)	<p>Redirecting (1)</p> <p>Serving (2)</p>

Table 37: Call Release to Pivot Scenario

(Sheet 2 of 2)

Step	Action	Reported Event	Connection Diagram
4	After no answer, the call is forwarded to Party B at 555-2222 using release to pivot.	IDIAP ₁ > Redirection (5552222) IDIAP ₂ > Release CIAP ₂ > CCClose (CCC2)	<p>Redirecting (1)</p> <p>Serving (2)</p>
5	Party B answers the call.	IDIAP ₁ > Answer (Unknown)	<p>Redirecting (1)</p>
6	The call is released.	IDIAP ₁ > Release CIAP ₁ > CCClose (CCC1)	<p>Redirecting (1)</p>

D.24 Intrasytem Handoff

←
The intercept subject hands-off within a system.

Table 38: Intrasytem Handoff Scenario

Step	Action	Reported Event	Connection Diagram
1	The intercept subject is in the conversation mode on a system.	Previously: CIAP> CCOpen (CCC1)	
2	The MS is handed off to different cell within the same system.		

D.25 Handoff to a Third System without Path Minimization

The intercept subject is in the conversation mode on an Anchor System. The anchor MSC determines the call should be handed off to an adjacent system (without path minimization). After a time, the adjacent system determines that the call should be handed off to a third system. After a time the third system determines that the call should be handed to the Anchor System. The call is released.

Table 39: Handoff to a Third System without Path Minimization Scenario (Sheet 1 of 2)

Step	Action	Reported Event	Connection Diagram
1	The intercept subject is in the conversation mode on an Anchor System.	Previously: CIAP> CCOpen (CCC1)	
2	The anchor MSC determines the call should be handed off to an adjacent system.		
3	After a time, the adjacent system determines that the call should be handed off to a third system.		

Table 39: Handoff to a Third System without Path Minimization Scenario (Sheet 2 of 2)

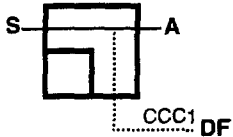
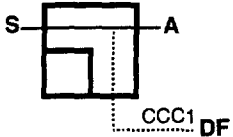
Step	Action	Reported Event	Connection Diagram
4	After a time, the third system determines that the call should be handed back to the Anchor System.		
5	The call is released.	IDIAP: Release CIAP> CCClose (CCC1)	

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D.26 In-Call Modification

While in a stable call with another party, the intercept subject requests a change in the bearer capability (e.g., voice to fax mode transmission).

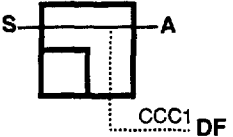
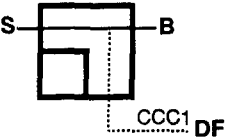
Table 40: In-Call Modification Scenario

Step	Action	Reported Event	Connection Diagram
1	While in a stable call with another party,...	Previously: CIAP> CCOpen (CCC1)	
2	...the intercept subject requests a change in the bearer capability (e.g., voice to fax mode transmission).	IDIAP> Origination (UserInput="", BearerCapability)	

D.27 Connected Party Modification

While the subject is in a stable call with another party A, the other party A transfers the call to another party B at 555-2222.

Table 41: Connected Party Modification Scenario

Step	Action	Reported Event	Connection Diagram
1	While the subject is in a stable call with another party A,...	Previously: CIAP> CCOpen (CCC1)	
2	...the other party A transfers the call to another party B at 555-2222.		

Annex E Optional Messages

This Annex is informative and is not considered part of this Standard.

E.1 ConnectionTest Message

The ConnectionTest message is an optional message tyhat may be usedto verify the connectivity of the CDC. This message may be sent during the provisioning process or at any oth er time.

The ConnectionTest message may be triggered when:

- a. manually invoked,
- b. periodically at an implementation specific interval, or
- c. automatically upon maintenance events.

The ConnectionTest message includes the following parameters:

Table 42: ConnectionTest Message Parameters

Parameter	MOC	Usage
Case Identity	O	Include to identify an associated Intercept Subject.
IAPSystemIdentity	O	Included to identify the system containing the IAP when the underlying data carriage does not imply that system.
TimeStamp	M	Identifies the date and time that the event was detected.
Memo	O	Include any information that may be useful for the TSP to communicate to the LEA.

```

ConnectionTest ::= [11] SEQUENCE {
    [0] CaseIdentity                OPTIONAL,
    [1] IAPSystemIdentity           OPTIONAL,
    -- include to identify the system containing the Intercept Access
    -- Function when the underlying data carriage does not imply that system.
    [2] TimeStamp,
    [3] VisibleString (SIZE (1..255)) OPTIONAL
}
memo

```

Standards Proposal Ballot+Clean

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